

Scope of the Claims

1. Antenna coil characterized in that a first coil and a second coil are coiled onto a core winding frame such that their respective coil axes are orthogonal.

2. Antenna coil of aforementioned Claim 1 characterized as being arranged such that the third coil is wound to surround the aforementioned first coil and second coil and that its winding axis is orthogonal to the two aforementioned coils.

3. Antenna coil of aforementioned Claim 2 characterized in that the aforementioned third coil is wound onto an insulated winding bar.

4. Antenna coil recorded in any of Claims 1 to 3, characterized in that the aforementioned various coils have numbers of loops adjusted so the electrical field intensity and the magnetic field intensity are more or less equal.

5. Antenna coil characterized as having a flat bar-shaped base component, a first coil wound such that its axis is the X-axis of the aforementioned base component; a second coil wound such that its axis is the Y-axis of the aforementioned base component; and a third coil wound such that its axis is the Z-axis of the aforementioned base component; and such that there is a groove in at least one part.

6. Antenna coil found in Claim 5, characterized in that the aforementioned base component has a flat, approximately right-angled parallelepiped shape; tabs are provided on the eight corners of the base component of the aforementioned right-angled parallelepiped shape; the first wall of the aforementioned tabs is oriented to become the lateral wall of the first groove whereon the aforementioned first coil is wound; the

second wall of the aforementioned tab members is oriented to become the lateral wall of the second groove whereon the aforementioned second coil is wound; the third wall of the aforementioned tab members is oriented to become the lateral wall of the third groove whereon the aforementioned third coil is wound.

7. Antenna coil found in Claim 6, characterized in that the aforementioned flat-shaped tabs have a quarter-circle fan-shaped configuration.

8. Antenna coil in any of Claims 1 to 7, characterized in that one of the four ends in the various aforementioned coils is connected to a respective common terminal and the remaining three ends are connected to different terminals, thereby providing four terminals.

9. Antenna coil found in Claim 8 and characterized in that the winding end side end component of the aforementioned first coil, the winding start side end component of the aforementioned second coil, and the winding stop side end terminal of the aforementioned third coil are connected to the aforementioned common terminal.